

What is claimed is:

Sub 17

1. A method of making reinforced paperboard cartons comprising the steps of:

(a) advancing a web of paperboard along a path, the web of paperboard having a width;

(b) progressively applying at least one ribbon of reinforcing material to the advancing web of paperboard, the ribbon having a width less than the width of the web of paperboard;

(c) cutting the web of paperboard to form carton blanks; and

(d) forming the carton blanks into cartons for receiving articles, the ribbon of reinforcing material providing reinforcement in selected portions of the cartons.

2. A method of making reinforced paperboard cartons as claimed in claim 1 and where in step (b) the at least one ribbon of reinforcing material is a ribbon of paperboard.

3. A method of making reinforced paperboard cartons as claimed in claim 1 and wherein step (b) further comprises advancing the at least one ribbon of reinforcing material along a path, applying adhesive to the advancing ribbon, and

progressively bringing the ribbon into engagement with the advancing web of paperboard to adhere the ribbon to the web.

Sub 32 4. A method of making reinforced paperboard cartons as claimed in claim 1 and wherein step (b) comprises applying a plurality of ribbons of reinforcing material to the advancing web of paperboard at predetermined locations across the width of the web.

Sub a 27 5. A method of making reinforced paperboard cartons as claimed in claim 4 and wherein the web of paperboard has opposed edge portions and wherein at least one of the plurality of ribbons of reinforcing material is applied along each edge portion of the web of paperboard.

6. A method of making reinforced paperboard cartons as claimed in claim 4 and wherein step (b) further comprises applying a first ribbon of reinforcing material to said web of paperboard and applying a second ribbon of reinforcing material to the first ribbon of reinforcing material to form a double thickness of reinforcing material on the web.

7. A method of making reinforced paperboard cartons as claimed in claim 4 and wherein the web of paperboard has opposed

edges and wherein at least one of the ribbons of reinforcing material is applied intermediate the opposed edges of the web.

8. A method of making reinforced paperboard cartons as claimed in claim 1 and where in step (b) the at least one ribbon of reinforcing material is applied at a predetermined location across the width of the paperboard web to provide reinforcement only in a selected region of the cartons formed in step (d).

9. A method of making reinforced paperboard cartons as claimed in claim 1 and further comprising the step of printing indicia on the at least one ribbon of reinforcing material.

10. A method of making reinforced paperboard cartons as claimed in claim 9 and wherein the indicia is printed on the at least one ribbon of reinforcing material before the ribbon is applied to the web of paperboard in step (b).

11. A method of making reinforced paperboard cartons as claimed in claim 1 and further comprising the step of scoring fold lines in the web of paperboard along which the carton blanks are folded in step (d) to form cartons.

12. A method of making reinforced paperboard cartons as claimed in claim 11 and where in step (b) the at least one ribbon of reinforcing material is positioned on the web so as not to cover a fold line.

13. A method of making reinforced paperboard cartons as claimed in claim 12 and wherein the at least one ribbon of reinforcing material has an edge and wherein the step of scoring fold lines includes forming at least one fold line adjacent the edge of the ribbon.

14. A method of making reinforced paperboard cartons as claimed in claim 1 and where in step (b) the at least one ribbon of reinforcing material comprises paperboard trim.

15. A method of making reinforced paperboard cartons as claimed in claim 1 and were in step (b) the at least one ribbon of reinforcing material comprises paperboard cull.

16. A reinforced paperboard carton made by the method of claim 1.

17. A reinforced paperboard carton comprising a plurality of panels defining walls of said carton and a layer of

reinforcing material applied at least to a selected one of said panels to reinforce said carton in regions defined by said selected one of said panels.

18. A reinforced paperboard carton as claimed in claim 17 and wherein said panels have interior surfaces and exterior surfaces and wherein said layer of reinforcing material is applied to the interior surface of said selected one of said panels.

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20. A reinforced paperboard carton as claimed in claim 18 and wherein said layer of reinforcing material is printed with indicia visible on the inside of said paperboard carton.

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21. A reinforced paperboard carton as claimed in claim 17 and wherein said layer of reinforcing material comprises a layer of paperboard.

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22. A reinforced paperboard carton as claimed in claim 21 and wherein said layer of paperboard is adhered with adhesive to said selected one of said panels.

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23. A reinforced paperboard carton as claimed in claim 22 and wherein a first portion of said layer of paperboard is

adhered to said selected one of said panels and a second portion of said layer of paperboard is not adhered, said second portion of said layer of paperboard being movable away from said selected one of said panels to form an interior structure of said carton.

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a ²⁴ 24. A reinforced paperboard carton as claimed in claim 21 and wherein said layer of paperboard comprises a layer of trim.

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a ²⁵ 25. A reinforced paperboard carton as claimed in claim 21 and wherein said layer of paperboard comprises a layer of cull.

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a ²⁶ 26. A method of making paperboard carton blanks comprising the steps of:

(a) advancing a web of paperboard along a path, the web of paperboard having a width;

(b) laminating a ribbon of reinforcing material to the advancing web of paperboard, the ribbon having a width less than the width of the web of paperboard and being positioned at a predetermined location on the web of paperboard; and

(c) cutting the web of paperboard and laminated ribbon into carton blanks of a predetermined size and configuration, the laminated ribbon forming a layer of reinforcement in a selection region of each of the carton blanks.

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A method of making paperboard carton blanks as claimed in claim 26 and where in step (b) the ribbon of reinforcing material is a ribbon of paperboard.

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A method of making paperboard carton blanks as claimed in claim 27 and wherein the ribbon of paperboard is paperboard trim.

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A method of making paperboard carton blanks as claimed in claim 27 and wherein the ribbon of paperboard is paperboard cull.

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A method of making paperboard carton blanks as claimed in claim 26 and wherein step (b) comprises advancing the ribbon of reinforcing material along a path, applying adhesive to the ribbon of reinforcing material, and bringing the ribbon into contact with the web to adhere the ribbon to the web.

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A method of making paperboard carton blanks as claimed in claim 26 and wherein step (b) comprises laminating more than one ribbon of reinforcing material to the advancing web of paperboard, each ribbon having a width less than the width of

the web of paperboard and being positioned at respective predetermined locations on the web of paperboard.

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A method of making paperboard carton blanks as claimed in claim 31 and wherein the web of paperboard has opposed edges and wherein at least one of the ribbons of reinforcing material is applied along an edge of the web of paperboard.

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A method of making paperboard carton blanks as claimed in claim 31 and wherein the web of paperboard has opposed edges and wherein at least one of the ribbons of reinforcing material is applied at a location intermediate the edges of the web of paperboard.

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A method of making paperboard carton blanks as claimed in claim 31 and wherein at least one of the ribbons of reinforcing material is applied atop another one of the ribbons of reinforcing material to form multiple layers of reinforcing material on said web of paperboard.

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A paperboard carton blank made by the process of claim 26.

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36. A paperboard carton blank comprising a base sheet of paperboard and at least one ribbon of reinforcing material on said base sheet, said at least one ribbon of reinforcing material being positioned on said base sheet to provide reinforcement in a selected region of a paperboard carton formed from said carton blank.

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37. A paperboard carton blank as claimed in claim 36 and wherein said at least one ribbon of reinforcing material is made of paperboard.

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38. A paperboard carton blank as claimed in claim 37 and wherein said paperboard reinforcing material is paperboard trim.

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39. A paperboard carton blank as claimed in claim 37 and wherein said paperboard reinforcing material is paperboard cull.